THE
MODERN SCHOOLMAN
A Quarterly Journal of Philosophy
MARCH, 1930

LEIBNIZ ON MATTER AND FORM
James A. McWilliams

Why Vitalism
John Kelly

The Value of Philosophy
Arthur E. Gleason

THE PLATONIC THEORY OF IDEAS
John Murray

Two Schools of Becoming
Stewart E. Dollard

Plato—Poet and Philosopher
Joseph M. Keane

TWO MISTAKES
An Editorial

SAINT LOUIS UNIVERSITY
Saint Louis, Mo.

25c per copy
Vol. VI

$1.00 per year
No. 3

"Entered as second-class matter December 1, 1928, at the post office at St. Louis, Mo., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of Oct. 3, 1917, authorized on Jan. 15, 1929."

PHILOSOPHY of VALUE

By Leo Ward

This work is a sustained attempt to answer as conclusively as possible the general inquiry, What does it mean to act? Practically every important thinker of our times has expressed himself on human affairs and conduct and the views of many of these men are presented and subjected to critical appraisal by the author. It is the only book in English on its subject written from the Catholic and Thomistic standpoint and its method of approach will be a boon to all students of philosophy. $2.25.

A Literary History of Religious Thought in France

I. DEVOUT HUMANISM

By Henri Bremond

An erudite and attractive picture of devout humanism in the seventeenth century. "The student of ecclesiastical history and literature will revel in this scholarly and brilliant book. . . . It will prove of great practical value to those who teach and preach." $4.50.

The Catholic Historical Review

Cosmology: *A Textbook for Colleges*

By J. A. McWILLIAMS

A systematic, philosophical study of the physical universe done on both a broad and a minute scale. Owing to the dearth of English texts in this field this book should serve to close a gap in the curriculum of colleges and seminaries. $2.50.

Elements of Ethics

By CHARLES C. MILTNER

A presentation of all essential problems of human conduct is given here in such simple and clear style and with such careful division of subjects and frequent summaries that it has proved itself a work of exceptional value to students. $2.25.

A Catholic View of Holism

By MONSIGNOR KOLBE

A valuable essay that supplements as well as criticises General Smutts' "Holism and Evolution." It is written with unusual clarity of style and is an enlightening account of the subject. $1.25.

These volumes are published by

THE MACMILLAN COMPANY

60 Fifth Avenue - - N. Y. C.

Catholic School Textbooks and Books of Devotion

PRACTICE OF PERFECTION AND CHRISTIAN VIRTUES: RODRIGUEZ. Translated by Joseph Rickaby, S. J. Three volumes, $3.20 per volume, $9.00 per set.

EXHORTATIONS, CONFERENCES, and INSTRUCTIONS OF SAINT JANE FRANCES FREMYOT DE CHANTAL. Compiled and translated by a Sister of the Visitation Order. $3.00 net.

AMERICAN HISTORY by Samuel Knox Wilson, S. J., Professor of History at Loyola University, Chicago. A high-school textbook. Retail, $1.92; discount to schools.

EARLY CHRISTIAN LATIN POETS. With notes and translation by the Reverend Otto J. Kuhnmuench, S. J., Professor of Latin at St. Louis University. An admirable textbook for colleges. Retail, $2.40; discount to schools.

THE ETHICAL BASIS OF INTERNATIONAL LAW, by William F. Roemer, Ph. D., Associate professor of Philosophy at Notre Dame. Dr. Roemer has exhaustively treated a timely question. This book is suited for a text on international relations. Retail, $2.50; discount to schools.

ON READING AND TRANSLATING LATIN, by Hugh P. O'Neill, S. J., and William R. Hennes, S. J. Paper, 62 pages; retail, $.16; in quantities, $.12.

SEND FOR OUR CATALOG

LOYOLA UNIVERSITY PRESS

3441 NORTH ASHLAND AVENUE CHICAGO, ILLINOIS

THE MODERN SCHOOLMAN

A Quarterly Journal of Philosophy

VOLUME VI | SAINT LOUIS, MARCH, 1930 | NUMBER 3

CONTENTS

Leibniz on Matter and Form ... James A. McWilliams 43
Two Mistakes ... An Editorial 44
The Platonic Theory of Ideas ... John Murray 46
Two Schools of Becoming ... Stewart E. Dollard 47
The Value of Philosophy ... Arthur E. Gleason 50
Why Vitalism ... John Kelly 52
Plato—Poet and Philosopher ... Joseph M. Keane 54
Book Reviews:
Process and Reality ... Alfred N. Whitehead 56
The Philosophy of Art ... C. J. Ducasse 57
The History of Philosophy ... Paul J. Glenn 58
Backgrounds of Biology John Giesen and Thomas L. Malumphy 58

LEIBNIZ ON MATTER AND FORM

JAMES A. MCWILLIAMS

Professor of Cosmology, St. Louis University

THE scientific movement at the close of the Middle Ages was generally regarded as anti-Aristotelian, and science has now been so long in the saddle that Aristotle's physics seem to many to be definitely unhorsed. Still, a scientist here and there, as the late Sir Bertram Windle, has seen a modern tendency to reinstate the central tenet of Peripatetic physics, the doctrine of matter and form. Hard upon the rise of the sciences came the development of mathematics. And it is interesting to note that mathematics show a similar tendency to confirm hylomorphism. Mathematicians have often turned philosophers, and one item that stands out in the encounter of mathematics with philosophy is the difficulty of the extensive continuum. In this connection Boscovich, Bayma, Bergson, Russell, Whitehead are names that leap to mind. Bergson found the continuum so insoluble to reason that he was prompted to throw reason overboard and go in for intuition.

The difficulty is an old one. A case in point is Leibniz. This versatile genius, co-discoverer (with Newton) of the differential calculus, found the continuum a bete noir. He compares it to the problem of predestination, declaring, "Revera ambo hi labyrinthi sunt theologorum et philosophorum, qui omnis aetatis theologos et philosophos divexarunt".[1] And in his second letter to Pere Des Bosses (S. J.) he shows that, unable otherwise to solve the mystery, he at one time even held matter to be actually divided into infinitely small particles.

> "Statuo materiam actu fractam esse in partes quavis data minores, seu nullam esse partem quae non actu in alias sit subdivisa."

He escaped from this extreme position only by finally denying extended matter altogether, and defining quantity as number. "Quantitas igitur est numerus partium. Hinc manifestum in re ipsa quantitatem et numerum coincidere."[2]

Mathematics cannot get along without numbers; and points provide the numbers. But a system of points is a logical construct. And mathematicians are justified in forming such constructs for the purpose of reducing extension to mathematical treatment. The fallacy is in

[1] *De Conformitate Fidei cum Ratione*, p. 24.
[2] *Introduction to Metaphysics.*

supposing such constructs to exist independently of the mind. While we admit that the mind can perform such operations on extension, if extension be a *datum to begin with*, we do not wish to be blind to what the mind is doing within the datum, and hence cannot think that extension is, independently of the mind, nothing but a network of relations between points. To admit that were tantamount to postulating an infinite complexity of separately existing entities in every extent, however small. Leibniz, foreseeing this ultimate conclusion of the relational explanation of extension, makes a decided and arbitrary halt on the way: he spaced his monads at *distances* from one another.

The result of all this is that Leibniz comes out at last for substantial form, which he says he had meditated on from the age of fifteen, though by his system of monads he finally eliminates matter altogether.

> "When I searched for the ultimate grounds of mechanism and the laws of motion I was altogether surprised to discover that it was impossible to find them in mathematics, and that it was necessary to turn to metaphysics. That is what led me back to the entelechies, from matter to form, and made me see at last, after many corrections and improvements in my ideas, that the monads, or simple substances, are the only true substances, and that material things are mere appearances." [3]

That Leibniz admitted qualitatively heterogeneous components in a unitary body is evident from what we may call his philosophy of organism, recently adopted, and adapted, by Professor Whitehead. "Thus", says Leibniz, "we see that every living body has a dominant entelechy, which in an animal is the soul; but the members of this living body are full of other living plants and animals, of which each again has its own entelechy." [4] In a letter to Bierling (Aug. 12, 1711) the same is said to be true of the whole of nature. This is equivalently the doctrine of subordinate substantial forms, which, while holding that there may be many forms in one being, nevertheless holds that all forms, whether dominant or subordinate, are principles of quality, activity and unity. Without these monadic forms, Leibniz declares in the letter last mentioned, matter were entirely passive and incapable of being explained on either a mechanical or mathematical basis.[5]

It is clear that the monads have the characteristics of form and not those of matter, and were so designed by their inventor. The high point of the present discussion is the impossibility which this eminent mathematician found in reconciling actual extension with substantial form. This is indeed emphasizing, if not over-emphasizing, the antithesis between matter and form. Leibniz, however, is in accord here, though perhaps unwittingly, with the prevalent persuasion of the Peripatetic school that, because extension is a property of matter, forms cannot of themselves be extended.[6] I mentioned above that the difficulty is between form and *actual* extension, because as a matter of fact Leibniz does recognize empty, or "possible", extension in his distances between monads. Far from considering that the world is spread out in space by a mere trick of the mind, as the subjectivists would have it, he explains the extramentally extended world as composed of discrete and spaced monads. Thus in a letter written at the beginning of the last year of his life:

> "I conceive extension as an order of parts existing outside of parts—an order spread out through the distances (the length of a straight line) of the separate entities from one another." [7]

It is clear that his difficulty is simply this, that matter, being in concept infinitely divisible, is incompatible with unity. Hence he determined to put a stop to division. He as it were chopped the continuum into tiny bits, then shrunk the bits into points and allowed that to be the structure of extension. He united the monads by a dominant monad into a unitary being. In this way he had unity without the bothersome divisibility of the continuum. For we must remember, that although he admitted many monads under the dominance of the superior monads, he never considered that the number of inferior monads in a given body might be infinite. The monads are ultimate atoms. But as M. Des Maizeoux points out,[8] they are not informed atoms of matter; they are origins of activity and forms without matter. To put it all in a single sentence: Leibniz, and with him many other mathematicians, are witnesses that matter as matter is the antithesis of oneness, that bare matter, as the Scholastics would phrase it, may be called body, but cannot be *a* body. "It is impossible", says Leibniz, "to find the principles of genuine unity in matter alone—in, namely, that which is only passive—for it is nothing but an aggregate or mass of infinite parts. . . Consequently, in order to find real unities, I was forced to have recourse to a form-atom; because matter cannot be at once matter and perfectly indivisible, nor possessed of genuine unity. That is the reason I had to hark back to and reinstate the substantial forms so decried in our day." [9] Had not Leibniz, like other philosophizing mathematicians, confused divisibility with division, and mental with extramental division, he could easily have admitted the existence of extended matter as well as form, and so have spared us his bizarre system of monads.

[3] *Letter to Remond de Montmort, Vienna*, March 14, 1714.
[4] *Systeme Nouveau de la Nature*, p. 78.
[5] Cf., also *Letter to Remond*, Hanover, Febr. 11, 1715.
[6] Cf., e. g., Suarez, *Metaph.*, D. xiii, S. 10.
[7] To Pere Des Bosses, Jan. 13, 1716.
[8] Cf., Dutens Edition of Leibniz's works.
[9] *Systeme Nouveau de la Nature*, p. 3.

THE MODERN SCHOOLMAN

Published Quarterly from November to May by the Jesuit Students of the School of Philosophy and Science of
SAINT LOUIS UNIVERSITY
SAINT LOUIS, MO.

RAYMOND H. REIS, *Editor*

Associate Editors

JULES J. ARBOGAST — MICHAEL I. ENGLISH
HENRY W. LINN — ROBERT J. STENSON
ALOIS M. RIECKUS — JOSEPH E. BOLAND

Corresponding Editors

CHARLES KEENAN
School of Philosophy
Mount St. Michael's
Gonzaga University
Spokane, Washington,

BENJAMIN L. MASSE
School of Philosophy
L'Immaculee Conception
1855 Rue Rachel Est
Montreal, Canada

RICHARD T. MEHREN
School of Philosophy
Sacred Heart College
Shembaganur, India

THOMAS J. STEMPER
School of Philosophy
St. Helier
Jersey, England

HUGO GERLEMAN
Gregorian University
Via del Seminario, 120
Rome, Italy

GEORGE A. MORGAN
School of Philosophy
Weston College
Weston, Massachusetts

PAUL L. ALLEN
Milford School of Philosophy
St. Xavier College
Milford, Ohio

25c per copy — $1.00 per year

TWO MISTAKES

THE Historians of Philosophy have not underestimated the debt which the modern world owes to Greece. The greatest thinkers through the centuries have acknowledged their debt to Aristotle in particular. To the Stagirite we trace the principles that are at the basis of Western Civilization. His formulæ have served as the foundation of governments, and the root of the truest culture. His is the only system of natural philosophy that has merited almost universal approval, and has endured. Philosophers have found that it is difficult to disagree with Aristotle, for his metaphysics is a formulation of the philosophy that every one practices, and nearly all believe, at least implicitly.

Together with his work on metaphysics, Aristotle left to posterity a treatise on physics, in which, recalling the primitive state of the work he undertook, we recognize a first-class scientist. Physics is essentially a cumulative science. Each worker is dependent on his predecessors. The advance of the past few centuries is largely accounted for by the development of instruments, and, what is no less important, the growth of the science of mathematics, particularly the Arabic numeral system. What a futile task Einstein would have if compelled to work with the old Roman numerals! These aids were unknown to Aristotle. But then he never supposed that science had attained a pinnacle of development in his own day. He did understand the necessity of an alliance between physics and metaphysics, and did what he could to further this co-ordination.

Christian Europe inherited both treatises. The superior value of the metaphysics was recognized. The greatest thinkers, then as now, knew that metaphysics is superior to physics, that mind is above matter, principles more important than facts. But with the growing admiration for his metaphysics, there went also an exaggerated respect for the physics of Aristotle, and his enthusiastic followers were reluctant to admit his deficiencies in any line. The Schoolmen, with some exceptions, had an eye only for his excellence as a philosopher. They made the mistake of not distinguishing between Aristotle the logician, and Aristotle the observer of nature. It was on this account largely that the scientific movement of the seventeenth century was not accorded the respect that was its due. Accordingly, the men of science, in revolt, threw over Aristotle altogether. They had an eye only for his deficiencies as a scientist. This last mistake was the worst.

Even a cursory survey of the trend of the past few centuries shows that the losses resultant from the disjunction of metaphysics from physics have never been retrieved. A number of schools have arisen built on the principle that experimental data are the only useful source in the attainment of truth and knowledge. This procedure, if followed rigorously, precludes any speculation on suprasensible topics, as the "scientific approach" does not leave room for a discussion of the immortality of the soul, the principle of life in organisms, or the possibility of a moral standard. Can a philosophy which denies a hearing to these eternal queries endure? Or have we not reason to think that already the modern temper is rejecting that unnatural philosophy of science which would altogether supplant metaphysical inquiry by the instruments of scientific research? Without logic, the more facts we gather, the less we know upon what they are founded. And men do not want to stop at proximate causes, which they must do, or else espouse metaphysics.

Discussions on Evolution, now current everywhere, emphasize the necessity of a correlation of physics with metaphysics, since evolution falls at once under the scope of physical science and metaphysical speculation. On the one hand we have the individual to examine from a biological viewpoint, while we cannot examine in a similar fashion the line of ancestors that produced the individual. *Inference* is basic here, so that the most important matter is the application of stable principles to available data. An accumulation of facts is a dangerous thing if a man cannot order and subordinate them according to principle and law. Scholastic philosophy, the treasury of the genius of Aristotle, has the principles. The union of science and true philosophy should produce not rivalry, but co-ordinated effort, useful to both studies. By such a union can the aspirations of the great Philosopher be realized, and two false steps retraced.

THE PLATONIC THEORY OF IDEAS

JOHN MURRAY
Heythrop College, Chipping Norton, Oxon., England

THE teaching of Plato, it has been shown, is that there are two opposed worlds, the one, of the Ideas, of eternal subsistent Forms which constitute all that is truly real and knowable, the other, the Universe of our experience, whose only claim to be real and intelligible is based upon the similarity it presents to the realm of Ideas. What, we may ask, did Plato conceive to be the relation between these two worlds, and how did he imagine the second world to have originated?

The earlier Dialogues answer this question by making the relation one of similarity, or imitation or participation *(dmoiosis, mimesis, methexis)*. An object is said, for example, to be beautiful, in one passage because it bears a resemblance to Absolute Beauty, in another, because it imitates it, in a third, because it participates in the Idea itself. These terms would seem to be used indiscriminately, though this is denied by scholars of such note as Jackson and Archer Hind, who have maintained that the term 'participation' *(methexis)* is the characteristic expression of the earlier Dialogues and an earlier form of the Ideal Theory, while that of imitation *(mimesis)* belongs to a later development of the theory, first proposed in the 'Parmenides'.

Whether this be accepted or not, (the reasons for accepting it are not convincing) it remains obvious that such expressions as "being copies of" and "participating in" are little more than metaphorical and throw no clear light upon the nature of this relation.

It must be remembered, in fairness to Plato, that in none of his works did he pretend to give a full and exhaustive exposition of his doctrines. His real teaching was an oral one, and was delivered in the Academy, which he had founded in a grove along the river Cephissus a short way from the city gates. The written dialogues, that are all we now possess, were issued from time to time and were intended to contain only what he thought fit to give a wider public in order to define his attitude to some particular problem or to point out the relation in which he stood to other schools. That there were developments in his thought of which we have no written record, would appear evident from the criticism of Aristotle, who was acquainted with both the oral and written teaching.

It is possible, however, to work out one line of explanation, which may well have been his final solution of this question. In the 'Sophist' he maintained that, since the Ideas are the objects of knowledge, they must be connected systematically with one another. In the attempt to determine what Ideas can enter into communication with others, he laid considerable stress upon the two notions of Sameness and Otherness or Difference. Each Idea is one with itself, and shares accordingly in the nature of Being and Sameness; it is also different from all Ideas besides itself and participates therefore in the nature of Difference. Difference is looked upon as Non-Being in the sense that any particular Idea, since it is different from other Ideas, excludes them from itself, and, because it does not contain their reality, may be looked upon as the Non-Being of these other Ideas. Every Idea comes to be regarded as containing in this sense both Being and Non-Being.

But since, for Plato, the whole of Being is contained in the World of Ideas, there ought to correspond to it an element of Non-Being. This is identified with empty space, and described, in the 'Philebus' and 'Timaeus,' as void and formless; in and for itself it is nothing and produces nothing; it is not even Matter, in the Aristotelian sense, for it is not *that out of which* objects are made, but a kind of shadowy featureless subtrate *in which* they are fashioned. The world that we see and feel around us comes into existence through the reflection of the Ideas into this element of space. In this reflection the unity of the Idea is broken up and distorted into a number of images, which, on account of the medium in which they are reflected, are spatially extended and, since they are continually passing away to make room for others, are involved in a temporal sequence. And so, while the realm of Ideas is the true Reality, this world of our experience is given a position mid-way between Being and Non-Being; it is not wholly real (that is the prerogative of the Ideas) neither, for it contains the image of Reality, is it entirely illusory; it partakes at once of the reality of the Ideas, and the unreality of the medium that mirrors them.

The Theory of Ideas is not the whole of Platonism, but it underlies it all and fashions its attitude towards psychology, ethics and politics. It was in some respects a tentative explanation and was never completely elaborated. It is therefore impossible to deny that it has points of extreme difficulty. But, when all is said and done, the permanent value of much of Plato's work will remain and the extent of its influence on thinkers of all ages cannot readily be estimated. The secret of this influence lies largely in the spiritual strength and depth of his character, in his earnest effort to attain to the Absolute Truth and the Abiding Reality, in that dissatisfaction with the things of the world and that ardent desire to reach out to the things that are beyond, to dwell in contemplation of Goodness and of God.

TWO SCHOOLS OF BECOMING

STEWART E. DOLLARD
St. Louis University

THE statement is frequently seen in modern histories of philosophy that all modern systems are but recrudescences of Greek thought. Attempts have been made to disparage modern thinkers on the score that so much of their thought has affinities with earlier thought. This surely is to mistake the nature of originality. Originality in thought does not imply the disregard of all that has been thought before; that is rather madness than originality. The man who can make use of the results reached by other thinkers because he sees more than they saw, the man who is able to find a fresh meaning in partial apprehensions of truth and who puts them to a fresh use, he is the man who merits the title of original.

Yet it is a fact that, when the modern mind is laid bare with the scalpel of searching analysis, it is found to have a structure very similar to that of the Greeks. There are Dynamists now, and there were Dynamists then; Atomists now and Atomists then. Realism, Idealism, and Moderate Realism are to be found in both ages. Knowingly or unknowingly James and Schiller look to Protagoras and his labarum, "Man is the measure of all things." Bradley is mirrored in Parmenides; and as there was a school of 'Becoming' in the time of Heraclitus, so there is one in the time of Alexander, le Roy, and M. Bergson.

The parallelism between the doctrines of Heraclitus and Bergson is especially striking; and though we would in no wise detract from the latter's originality, one is almost tempted to venture a guess that the days and nights of Bergson were given to the reading and study of his ancient prototype.

The declaration that all reality consists in flux or change is the foundation on which the philosophies of both rest. Nothing 'is'; and things that seem to be solid and undergo no change are but periods or sections of the perpetual flow. They are but glimpses of reality, not reality itself.

To the exposition of this doctrine M. Bergson has brought a brilliancy of style and expression and a wealth of imaginative insight. And the versatile quality of his genius and the appeal and daring of his ideas have given him an influence that only now, after some years, is beginning to wane. Yet his doctrine, because of its daring, still remains a stumbling block to the average student. It is in these characteristics of expression that we find the first similarity with Heraclitus.

In impressiveness and strength the fragments of Heraclitus are almost unique. Like his disciple in the school of Change, he constantly uses powerful and suggestive metaphors and images, which are none the less imposing because they are occasionally obscure. His obscurity has even won for him the surname of 'skoteinos', a title, we think, equally merited by his successor.

The chief difficulty in the philosophy of both is understanding the central principle that all is change. According to Bergson, who endeavored to get away from static materialism, things which undergo no change are not reality, for they belong only to what he calls imaginary time. The reality which is behind all appearances must be the real, ever-flowing time (la duree). Reality is a flow; what does not flow is unreal.

> "We concentrate", he says, "a period of this evolution in a stable view which we call a form, and when the change has become considerable enough to overcome the fortunate inertia of our perception, we say the body has changed its form. But in reality the body is changing form at every moment; or, rather, there is no form, since form is immobile and the reality is movement. What is real is the continual change of form; the form is only a snapshot view of a transition. Therefore, here again, our perception manages to solidify into discontinuous images the fluid continuity of the unreal. When the successive images do not differ from each other too much, we consider them all as the waxing and waning of a single *mean* image, or as the deformation of this image in different directions. And to this mean we really allude when we speak of the *essence* of a thing, or of the thing itself." [1]

Heraclitus also was a reactionary against materialistic monism. To him change is not an awkward intruder upon the permanence of the one unchanging world-substance but is the very essence of the world-substance itself. Being is a process of Becoming; permanence is but the permanence of the fact of change. This incessancy of change and movement is expressed in the sayings: "All things are flowing; nothing abides." "The Sun is new every day." (Hywater, fr. 32) "Into the same river you cannot step twice." [2]

Bergson's philosophy seeks to explain this evoluntionary process along novel lines. Unlike the Ephesian, he approaches the problem through biology and psychology. Adaptation to environment and chance survival of the fittest (the mechanistic theories of evolution) are found to be utterly inadequate. There must be some force driving evolution on to further self-perfection. This driving force or immanent principle is a kind of vital surge, his famous *elan vital;* and this explains how and why evolution, like Tennyson's brook, goes on forever.

Evolution, under stress of the *elan vital,* is conceived by Bergson as the throwing off of worlds and matter from some unlocated center, much after the manner of a pyrotechnic pin-wheel.

[1] M. Bergson, *Creative Evolution,* p. 318.
[2] apud Pl. Crat. 402 A.

> "At a certain moment in certain points of space, a visible current has taken rise; this current of life, traversing the bodies it has organized one after another, passing from generation to generation, has become divided amongst species and distributed among individuals without losing anything of its force, rather intensifying in proportion to its advance." [3]

The world, then, is the materialization of the *elan vital*, which progressively creates the evolving universe. But since, as we have seen, nothing but ceaseless change can exist, this materialization is metaphorically described as a "continuity of overflow," an expression implying that the *elan vital* has neither beginning nor end, completeness nor finality.

In Heraclitus there is an analogous principle of evolution, the equally famous doctrine of the *Logos*.

> "This Logos is always existent. . . . For although all things happen by the Logos, men seem as if they had no acquaintance with it when they experience such words and works as I expound, dividing each thing according to its nature, and explaining how it really is. . . ." (fr. 1)

The *Logos* is eternal. It is a cosmic principle through which all things—both in the material and spiritual order—are brought about. But it is not to be supposed that the *Logos* is merely a sovereign ordinance, which Nature obeys; it is endowed with reason. For from another fragment we learn that

> "Although the Logos is universal, most men live as if they had a private intelligence of their own." (fr. 92)

So marked an antithesis clearly demonstrates that the Heraclitean *Logos* is itself intelligent, capable of directing the universe it "steers" (fr. 28) toward a final end.

M. Bergson, however, though decisively rejecting any form of fortuitous mechanism in the words:

> "The mechanistic philosophy . . . . must be left if the least grain of dust, by straying from the path foreseen by mechanics, should show the slightest trace of spontaneity." [4]

nevertheless hesitates before unreservedly accepting a teleological world principle. For if there is a plan according to which the universe moves, then his time-spirit would be ruled out; and without the *la duree* his philosophy is a mass of inconsistency. He hesitates but is willing to make a concession.

> ". . . . if the accidental variations that bring about evolution are insensible variations, some good genius must be appealed to . . . . the genius of the future species . . . . in order to preserve and accumulate these variations." [5]

In other words, his *elan vital* has no preliminary plan but must solve each problem as it presents itself. Thus the modern and the ancient apostles of 'fieri' differ slightly in their concept of the universal principle: Heraclitus declares for an intelligent, omniscient being. Bergson upholds a doctrine of semi-finalism; the controlling entity does not exist beforehand, but is created to meet a particular need at a particular crisis.

[3] M. Bergson, *op. cit.*, p. 27.
[4] *Op. cit.*, p. 42.
[5] *Op. cit.*, p. 72.

If all things are changed, and this change is brought about by a universal cosmic principle, what, then, is the stuff that people call "matter"? Departing a bit from his rigid dogmatism, Bergson asserts that matter is not a mere figment of the intellect. Though in its own right it has no existence, yet there is something other than the forward surge of the *elan vital*. The latter's continuous flow does not proceed without interruption. Sometimes this flow is interrupted and turns back upon itself. This retrograde movement is matter. Reality, he says, is like a fountain: the jet of the fountain is the pure *elan vital*, the drops which fall back are matter. There is a flow upward and a proportionate descent.

> ". . . . matter has been defined as a kind of descent, this descent as the interruption of a rise, this rise itself as a growth." [6]

In attempting to square this doctrine with the doctrine of change he becomes monistic. Since the vital surge upward is immaterial, then matter, which is but the inversion of the same thing, must also be immaterial.[7]

The position of Heraclitus is somewhat similar. In his philosophy the spiritual is not yet separated from the material, and although he forsakes the Milesian school by investing his primal substance with life and thought, he is still a hylozoist in the fullest sense. The particular kind of matter forming as it were the body of the *Logos*, Heraclitus believes to be Fire. With this element he also identifies the Cosmos; in other words, Fire is the ever-changing substance to which alone reality belongs. And, like Bergson, he maintains that the universe must traverse an upward and downward path (fr. 69). All things are forms or manifestations of Fire, because Fire is transformed into all things (fr. 22). Understanding "soul" as "fire," he says: "It is death to souls to become water; it is death to water to become earth; yet from earth is water born, and from water, soul." (fr. 68)

However, with Bergson he admits a quasi-duality of things. Bergson holds that the "real" is opposed to the "material"; but it is of their union that the perceivable world is made up. So, the unity of opposites is the cornerstone of Heracliteanism. "Opposition is co-operation: the fairest harmony results from differences." (fr. 46) "Were there no higher and lower notes in music, there could be no harmony at all." (fr. 43) The doctrine of opposites, Professor Burnet remarks, is nothing but the "two faces of the Fire which is the thought that rules the world." (p. 145) The gist of the matter is contained in the sentence: "From all comes one, and from one comes all." (fr. 59)

Thus far the philosophies of both Heraclitus and Bergson have been shown to agree, in general, in the reality of change, the one universal cosmic principle, and the distinction between the "real" and the "apparently real." It remains to consider now the faculties which perceive the "real" or "unreal".

[6] *Op. cit.*, p. 290.
[7] *Op. cit.*, p. 258.

To become aware of the reality of change our consciousness (a synonym for "evolving life") must also flow; it must become aware of Duration. Now Duration is not a mere succession of moments; it is "the continuous progress of the past which gnaws into the future". As really changing beings, we belong to this Duration; and if we attend to our own experience, we may become conscious of the pulsing of Duration within us. The act is undefinable, but it is called "Intuition." Intuitional experience gives the whole of things, their real essence; the knower plunges into the flux of reality and becomes one with it. It transports him into the very heart of the real, whether that real be a rose or God Himself. It is a kind of intellectual sympathy.

Intellect, however, is quite the opposite of Intuition. The Intellect's object is unreal, inert matter. The Intellect does not deal with reality—the unceasing flow of time—directly. It only takes snapshot views of it. "Of the discontinuous or of immobility does the intellect form a clear idea."[8]

In the simile of a symphony Bergson again attempts to explain the functions of each faculty. We may regard a symphony in two ways: either as a conglomeration of notes, or as a complete entity. The view which Intuition gives is like the second way of considering the symphony. We enter into and appreciate the meaning of the entire symphony, as we enter into and grasp the nature of reality, that is, as an indivisible whole. Intellect considers only the single notes or inert matter as the case may be. In the words of Bergson:

> "Instinct is sympathy. If this sympathy could extend its object and also reflect upon itself, it would give us the key to vital operations—just as intelligence, developed and disciplined, guides us to matter. For—we cannot too often repeat it—intelligence and instinct are turned in opposite directions, the former toward inert matter, the latter toward life. Intelligence, by means of science, which is its work, will deliver up to us more completely the secret of physical operations; of life it brings us, and, moreover, only claims to bring us, a translation in terms of inertia. It goes all around life, taking from outside the greatest possible number of views of it, drawing it into itself instead of entering into it. But it is to the very inwardness of life that *Intuition* leads us—by Intuition I mean instinct that has become disinterested, self-conscious, capable of reflecting upon its object and of enlarging upon it indefinitely."[9]

Of course Heraclitus did not approach the problem of change through psychological intuition; yet he claims to have arrived at the truth by investigating himself (fr. 80). We may compare, in another sense, the exhortation of St. Augustine: "noli foras ire, in te ipsum redi; in interiore homine habitat veritas." (de vera relig. xxxix. 72.) Heraclitus in his youth confessed to knowing nothing, but declared himself omniscient after he became a man (Diog. Laert. ix. 5). This would point to some kind of a sudden illumination analogous to Bergson's intuition. In any case, Heraclitus is profoundly convinced that he has seen the truth intuitively; and of this truth he claims himself the prophet. He exhorts men "to hearken not to me, but to the *Logos*" (fr. 1), for true nature loves to hide herself (fr. 10). The *Logos* is always existent, but men fail to hear it, and act as if they had no experience of it. (fr. 2) Reality reveals itself in daily life, and he who runs may read it, but men are sunk in intellectual slumber. As he elsewhere complains: "the multitude do not understand the things with which they meet, nor when they are taught, do they have knowledge of them, although they think they have." (fr. 5) They are, in short, lacking in intuition: "for eyes and ears are bad witnesses to those who have barbarian souls." (fr. 4)

The concept that M. Bergson forms of God is worthy of note. As the followers of Parmenides would do, he makes God to his own image and likeness. It would seem that in suppressing all being and substituting becoming, he has left no room for that Being who is essentially being —ipsum esse. Yet he speaks of God as "center from which worlds shoot out like rockets".[10] This "center," however, as we have noted above, is not a *thing*, but is merely a continuity of shooting out. His God is merely unceasing action or evolution.

To this deified principle that overflows, Bergson has given many names. Sometimes he calls it merely Time; sometimes Duration (la duree). Sometimes the *elan vital* itself is his deity. This is not blasphemy, for an evolving God is more perfect than a static one.

> ". . . . there is *more* in a movement than in the successive positions attributed to the moving object, *more* in becoming than in the forms passed through in turn, *more* in the evolution of form than in the forms assumed one after another."[11]

The brave pronunciamento that God is Time has reminded one of his critics of a similar definition. A crab was once defined as a red fish that walks backwards. The definition fails only in this: that a crab is not a fish, is not red, and does not walk backwards.

An evolving God also was the choice of Heraclitus.

> "There is but one Logos (Wisdom). It wills and yet wills not to be called by the name of Zeus." (fr. 65)
>
> "God is day and night, winter and summer, war and peace, satiety and hunger. But he is changed, just as fire, when mingled with different kinds of incense, is named after the flavor of each." (fr. 36)

Here again we may conclude that Heraclitus was the model for Bergson. His God, from one point of view, is the *Logos*, or, from another, Fire (fr. 20); he is the unity in which all opposites are reconciled. We can see that this godhead, like Bergson's, evolves itself into a world and eventually absorbs all things again. This ceaseless rotation or evolution—"the upward and downward path"—however, is one and the same (fr. 69); so we must finally consider the God of Heraclitus as the ultimate harmony transcending all opposition. This concept of transcendent harmony is certainly identical with that of the modern school of Becoming, especially of Alexander,

[8] *Op. cit.*, p. 164.
[9] *Op. cit.*, p. 186.
[10] *Op. cit.*, p. 262.
[11] *Op. cit.*, p. 333.

Continued on page 55

THE VALUE OF PHILOSOPHY

ARTHUR E. GLEASON
St. Louis University

ONE of the prominent characteristics of medieval civilization in Western Europe was the keen interest in philosophical speculation. The wealth of St. Augustine's ideas was fused with Aristotle's principles into one homogeneous philosophy, and this philosophy shared with theology the hegemony of intellectual pursuits. Philosophy was ranked above the sciences, because it uses as raw material the highest achievements of scientific discovery. But with succeeding centuries philosophy lost favor and surrendered its leadership in the field of learning. Scholars sought to shake from their minds the mists of metaphysics and from their hearts the burden of the moral law. Humanism, a return to the mentality and the literary form of antiquity, came to the fore. Antiquity was made to live again; it was the idol of the hour. "The absolute artistic superiority of the ancients," says Godefroid Kurth, "was an axiom as incontestable as the dogmas of faith".[1] Philosophy found few lovers when paganism clothed in beautiful literary garb strove to win the heart of every scholar.

"Modern paganism", Father Gillis tells us, "is another renaissance, a recrudescence of the paganism of the golden age of Augustus and Tiberius Cæsar".[2] There is, however, a difference in the two revivals of things pagan. In their transitional age, men abandoned philosophy for belles-lettres; in our mechanical age, men turn from philosophy to physical sciences. In the first renaissance Latin and Greek texts were considered source books of wisdom; in modern times the microscope and statistic sheet are deemed supreme instruments of learning. In the earlier period, rhetorical bravuras were hailed as expressions of the beautiful; now scientific theories bask in the sunshine of popularity. Today science is deified and a cold welcome accorded pure philosophy. But why, one may ask, has philosophy failed to find favor among the majority of modern scholars? Why has this erstwhile queen of sciences been made to abdicate her throne in the realm of knowledge, and to assume a humbler rôle among the now exalted special sciences? Why does philosophy seem of so little value to a student of today? What return does philosophy promise for the time and effort invested in its serious study?

In answer to the first question why philosophy is so often discredited nowadays, why it so often seems a jumble of contradictions rather than a harmonious unification of knowledge, we have but to point to the source of confusion in modern philosophy. Descartes, the great reformer of philosophy, and Kant, the inventor of critical philosophy, made a muddle of systematized thought, the one by completely separating mind and matter, the other by creating a chasm between the knowing mind and the knowable world. Descartes permitted the "sin of angelism" by falsely emancipating the human intellect from sense cognition; Kant unlawfully divorced the will from its natural guide, the intellect. Descartes built up a system of thought on the doctrine of doubt and "private interpretation"; Kant developed this disastrous doctrine of Subjectivism by ornating the mind with innate forms. Descartes' principles, his mechanical explanation of vegetal and sensient life, led to Rationalism and Empiricism,—hence the Philosophy of Fact. Kant's denial of a faith founded on reason, and the immanence of the moral Law-giver has degenerated into Pantheistic and psychological immanence of God and the universe, religion has become a thing, not of objective truth, but of pragmatic value—hence the Philosophy of Value. From the theories of these leaders have sprung the numerous conflicting philosophies of the present day, so that Bossuet had reason to say in speaking of the Cartesian Philosophy, "Je prévois de grands orages qui vont sortir de cette philosophie." (I foresee great storms that are going to rise from that philosophy.)

When we contemplate the passing show of thought, when we see the incongruity, the instability of various philosophic creeds, when we read the obscure expressions of the modern mind, then do we appreciate the words of the learned critic, Fredrick Schlegel: "Unhappily experience and the history of our own times teach us that Philosophy not infrequently misleads and involves in the most disastrous perplexity whilst pretending to direct the footsteps of the pilgrim to the serene realms of truth." "The very charges and grievances", continues the same authority, "preferred by philosophers against each other have contributed to make their mutual disagreements notorious among the uninitiated." Despite this accusation, alas too true! these "very charges and grievances" are in many schools the only philosophy taught. The study of philosophy is made synonymous with the story of philosophy, and instead of guiding the student to the serene realms of truth, it misdirects him to a jungle of obsolescent systems of philosophy. And where is the man who can follow the tangled trail of truth in that age-old wilderness of human speculation and error?

But if philosophy is more than a study in speculation, more than a collection of theories, what is it? If it is the tree of knowledge, where are its fruits? Philosophy, we claim, is indeed more than a congeries of speculations, more than an inventory of possible beings or bloodless

[1] *The Church at Turning Points in History*, p. 123.
[2] *False Prophets*, p. 174.

abstractions. It is a tree of knowledge whose many branches bear the precious fruit of ripe wisdom.

Philosophy's utility may be considered from several viewpoints, as the handmaid of theology, or as a means of intellectual culture, or again as the unifier of knowledge. Some centuries ago, philosophy was thought of primarily as the stepping-stone to the nobler study of theology. There is an echo of the supernatural in the natural, grace presupposing and building upon nature. Truths learned with the dim light of reason serve as an introduction to a knowledge of God and His works viewed in the bright light of Revelation. Another evaluation of Philosophy is derived from the broadening, deepening effect produced on the mind. Undoubtedly much can be said in favor of Philosophy as a mental trainer. In this paper, however, we propose to indicate the value of Philosophy by reason of its scope, to show its utility from the very breath of knowledge it imparts.

The subject matter of Philosophy is as extensive as the universe, embracing all reality, all that is and can be, treating of God and His creatures, even the creatures of the human mind. We cannot agree with Mr. Russell that "Philosophy must make only such assertions as would be equally true however the actual field were constituted." We cannot thus cramp the field of philosophy, we cannot limit it to logic. Philosophy is too extensive, too deep, too lofty, too vital to admit such restriction. Philosophy is more than mere dialectics; it is more than "the science of thought." Philosophy is greater than a special science; it is, as Paulsen says, "the sum-total of all scientific knowledge." It is an orderly inquiry into the ultimate causes of all things, and its proper object, therefore, is the study of all things in their simplest, most complete, and most final elements. Its very comprehension gives it value.

But how, one may ask, can this vast field of knowledge be suitably segmented? What are the principal divisions, and of what does each treat? The first two main divisions of philosophy are the speculative and the practical. The first considers the order of nature, God's creation. The second has reference to man's own creation, the work of his intellect and will. The first includes General Metaphysics—the study of being and its common properties, and Special Metaphysics embracing Theodicy—the study of God, Cosmology—the study of the world, and Psychology—the study of Man and his psychic states. Practical Philosophy consists in Logic, which treats of methods for correct thinking and examines the objective value of concepts, judgments and ratiocination. Ethics, another branch of Practical Philisophy, formulates guiding rules for human acts based on right reason, examines the motives which impel men to act morally and appraises the sanctions offered to justify or condemn their choice. Politics, too, is sometimes accounted a separate division, being the study of social organization, of the family, the State, socialism, feminism. Esthetics, the Philosophy of the Beautiful, is now considered as an appendix to Theodicy, now as an integral part of Ontology.

But when we look at philosophy thus disjointed, it loses its charm. Unfortunately that is the way we must acquire it, learning bit by bit, and it is probably because of this piece-meal procedure that many are prone to disparage the value of philosophy. In studying it we take thesis after thesis, we see the fragments one at a time and often lose sight of the connecting links. Somewhat like the laboratory specialist peering into his microscope, we see the unit but not the unity. This slowness at grasping the general outline of philosophy and the awkwardness in pigeon-holing new information are perhaps the chief difficulties encountered by the seeker after the wisdom found in philosophy. Other obstacles there are that beset the student of philosophy and make him forget the grandeur of this subject. He realizes that there is no short cut to wisdom, that philosophy demands intellectual effort, then he looks at a detached portion of this subject and asks, "What is it all worth?" Philosophy does require serious study, but as Ben Jonson remarked, "The mind of man is still fed with labor, opere pascitur," and laborious, thorough thinking is ultimately worth much more than the mere amassing of factual information. Rightly to appreciate philosophy we must stand aside and look upon it as one harmonious whole; then does Plato's "dear delight" show itself a study of pre-eminent value. Then will we repeat the words of Cicero, "Nunquam igitur satis laudari digne poterit philosophia."

By presenting in panoramic review the content of philosophy we find, among others, the following benefits bestowed upon her devotees. The first fruit of philosophic study is a rigid training in correct methods of thinking, a reliable guide to avoid intellectual pitfalls. The second blessing obtained from philosophy is a firm footing on the bed-rock of knowledge, a proper understanding of logical truth, the meaning and source of certitude, and of the interrelation of mind and matter in the processes of perception. Then, too, General Metaphysics, that little understood and oft despised branch of philosophy, gives us a grand conspectus and systematic arrangement of the entire field of being, of causation and transcendental concepts. It defines and explains such notions as substance and accident, essence and relation. Cosmology offers reasons for the order in the universe, its origin and laws, endeavors to explain the ultimate components of material things, and to clarify such common but commonly confused ideas as Time and Space. Man's mind is another kingdom which philosophy seeks to invade in order to learn its secrets. Psychology expounds as far as possible the nature and operations of the soul.

There are yet greater values derived from philosophic inquiry, for besides studying the finite things of earth, it furnishes us with a scientific knowledge of God. The whole of Theodicy has no other purpose than to prove

the existence of God and to explain, as far as human reason can fathom the Infinite, the divine attributes. God is the First Cause and the Last End of man and surely a science that makes Him a special study, that conclusively proves His existence, investigates His nature and examines His perfections is of no slight importance and utility.

Nor have we exhausted the list of benefits conferred by philosophy. It shows us the exact determinations of our relations to God, to our fellow-men and to ourselves. Philosophy gives us the why of morality, defines and explains law, justice, obligation; points out rights and duties, their foundation and extent. In fine, philosophy alone of all the sciences searches out the ultimate causes of all things, and as Vergil says:

"Felix qui potuit rerum cognoscere causas."

Other sciences seek little fractions of knowledge; philosophy seeks to synthesize all knowledge. Philosophy welcomes the findings of other sciences, unites the narrow knowledge of the specialist with the wisdom of the ages and presents us with what Hoernle called "the synoptic vision".

If History is highly valued and rightly so, since, "No man is ignorant who knows how the past came to be the present", if it is of value to know the habits of the amœba, to look into the atom, to read the record of ages in the rocks, is it not of more value to know what the greatest minds, past and present, thought and think of life's profoundest problems? If physical sciences are esteemed so highly for their wonderful advances in the path of mechanical progress, what must be the value of philosophy "without which," says Will Durant, "the knowledge of sciences is as chaotically helpless as sensations that come to a disordered mind, making an idiot's lore"? Can philosophy, which Coleridge has well named the "scientia scientiarum", be of less value than those other loudly vaunted sciences that give but an inadequate explanation of sensible phenomena? Surely that science which seeks the ultimate reasons of all things is as valuable as those sciences which give but proximate causes of some things. Surely that science which deals with the most fundamental and most far-reaching questions raised by mankind from the beginning of history deserves an important place in the formation of every man.

WHY VITALISM

JOHN KELLY
Maison S. Louis, Saint Helier, Jersey, England.

THE past twenty years have witnessed a revolution of no small importance in the field of scientific philosophy—a revolution which, to judge from scientific works published toward the close of the nineteenth century, was certainly not expected to take place within so short a time nor with the vigor that actually brought it about. It is at any rate true that after a long period of almost total eclipse, Vitalism has returned to the forefront, no longer taking a purely defensive attitude as before, but, confident in its inherent truth and worth and in the illustrious men of science it has rallied to its side, it is rapidly recovering much of the territory that such a short time ago seemed irrevocably lost.

It is my purpose in the present article briefly to point out some of the reasons that brought about this revival, and which will show the true value of Vitalism from a scientific and philosophical viewpoint.

First, however, it will be well to define what is here understood by Vitalism. I do not intend to consider any one vitalistic system, much less to review them all; confining myself to one alone might give a false impression, since almost every scientific vitalist of international renown upholds a theory all his own. Hence it seems better to give the following description which is generally accepted by both its adherents and its adversaries: "Vitalism is a theory which holds, firstly, that the phenomena of life cannot be fully and completely explained, even scientifically, by mechanical laws and principles and by mathematical formulae, and secondly, that all vital processes manifest some kind of finality."

This thesis is diametrically opposed to that held by the opponents of Vitalism, and which held practically undisputed sway among men of science for fully fifty years after the publication of The Origin of Species. Mechanicists claim that the laws and principles which are known to govern inorganic matter can be applied to vital phenomena in the same way, and that once science has attained a perfect knowledge of those laws the method can offer an explanation of life and its processes that will completely satisfy man's legitimate curiosity and desire for knowledge. Hence, they say, any effort to introduce a "vital principle" or similar "mystical concept" in order to explain these phenomena, is to halt the progress of science; the vitalist will excuse himself from further research by invoking this mysterious "vital principle" beneath which he shields his intellectual sloth or cowardice.

To be perfectly just, we must add that Mechanicism does not necessarily imply Materialism. The latter is a philosophical, atheistic dogma, while the former, strictly speaking, is a *scientific* method whose purpose is to determine the mechanical principles that govern vital phenomena, and which does not—or at least should not —pretend to be an explanation of the nature and essence of life and its characteristics. One can be a mechanicist, just as he may legitimately hold scientific determinism as a working theory in the study of inorganic phenomena,

without at the same time being a materialist. It is nevertheless true that the scientific theory is apt to lead to materialistic conclusions; as a matter of fact the great majority of mechanicists today are likewise materialists.

Again, it must be conceded that mechanicists have a just right to pride themselves upon the prodigious advances made in biology, physiology, anatomy, etc., during the past three-quarters of a century. Mechanical methods are certainly to be thanked in great part for this progress; no other method is open to the exact sciences, and the vitalists themselves must employ precisely the same method in their laboratory work.

Now to come to the point. Vitalism, being impregnated with the "mystical concept" of finality, has often been called scientifically sterile (Lord Bacon's pithy remark on the sterility of finalism is well known). Secondly, Vitalism is said to be a positive obstacle to the progress of science.

With the first of these two accusations we have no fault whatever to find. Vitalism is essentially a philosophical doctrine, precisely because its attention is directed towards an aspect of reality that does not come within the scope of the yard-stick or the balance. For this reason, the conclusions drawn by the vitalist from his scientific experiments are of necessity philosophical. They are, furthermore, usually negative, in so far as they are intended to point out that those advanced by his adversary the mechanicist are incomplete and unsatisfactory, at least philosophically, if not scientifically as well. His purpose is to show that a sane *philosophical* explanation of reality must include aspects other than those which can be attained with the aid of any laboratory instrument.

I presume, of course, that the reader is acquainted with the principal arguments for and against Vitalism. Nevertheless, in order to make clear how utterly mechanical principles fail to explain the whole reality that is manifested in the vital processes, let us cite the following passage from Professor E. Rignano of the University of Milan, undoubtedly one of the foremost vitalists of the present time: "The method of investigation which the physiologist adopts, deliberately limited as it is to the recording of purely physico-chemical phenomena (which, instead of throwing light upon the characters peculiar to life, rather hinder their detection), has not for this very reason advanced us one step towards an understanding of what life really is. That the most fundamental and most characteristic phenomena of life must escape this method of investigation is easily to be seen as soon as one adopts another method of research better adapted to the examination of truly vital manifestations. Thus, for example, a physico-chemical analysis of cerebral phenomena—an analysis capable merely of recording electric currents, variations of temperature, the production of certain waste substances, the consumption of certain amounts of oxygen, etc.—would never have succeeded in bringing to light even the elementary phenomenon of association of ideas, which was on the contrary quickly and easily discovered by introspection."[1]

We admit, then, that Vitalism is scientifically sterile. However, the statement that the theory is an obstacle to the progress of science is entirely false. On the contrary, it can and should be the helpmate of true science. Its value and importance lies in this, that in challenging every alleged discovery and in exacting a satisfactory basis for every hypothesis or scientific "fact" proposed by the mechanicist as experimentally demonstrated, it protects science from a rash self-confidence that would be as fatal to its best interests as an exaggerated finalism couched in the style of a Bernardin de Saint-Pierre. As a consequence of this control, every advance would mean a real addition to our knowledge of the laws of life. The Vitalist could point out to his colleague, the Mechanicist, just where the latter's laboratory conclusions conflict with equally trustworthy evidence obtained through other methods of observation. Thus through friendly cooperation, instead of by mutual recrimination as is too often the case at present, we should be able to build up a solid and true natural philosophy.

This, then, is the most important function of Vitalism, namely, to force the scientist—and especially the scientific philosopher—to envisage *the whole of reality*, to realize that this whole reality presents properties that defy any attempt at a mathematical or physico-chemical estimate; it prevents the eloquent but narrow and prejudiced views of an Ernst Haeckel from being taken as a sane philosophical or scientific doctrine. After all, every scientist has philosophical convictions that color more or less perceptibly his interpretation of the phenomena he observes. The mechanicist who asserts that all the properties manifested by a living organism require no other explanation than the one science will be able to give in purely mechanical terms, once it has discovered all the physico-chemical causes and all the mechanical laws which govern their action, speaks a language just as metaphysical, i. e., which goes just as far beyond the limits of strict science, as that employed by the vitalist. To ask that both parties honestly admit this evident fact does not seem unreasonable.

The mechanicist assures us that the backwardness of science in centuries past can be traced to the extravagant Vitalism of the time, and that when Science was once set free from its "mystical" thraldom, it sprang forward with leaps and bounds. This accusation might seem at first sight to bear some weight; the facts themselves would seem to point in this direction.

However, one who is familiar with the history of philosophy knows that a simplist philosophy is too often the direct result of a backward science, and not vice versa. To take but one example, we may consider how intimately Aristotle's "scientific philosophy" was bound up

[1] Eugenio Rignano, *Qu'est-ce que la Vie*, Alcan, Paris, 1926, p. 147.

Continued on page 56

PLATO---POET AND PHILOSOPHER

JOSEPH M. KEANE
Weston College, Weston, Mass.

PHILOSOPHY in the real and deepest signification of the word, begins with the name of Plato. He stands forth as the first genius to comprehend philosophy in its entirety, the first to mould and to stabilize philosophy into a system of extensive and accurate thought. Plato, however, was not merely a philosopher; he was also, and in a pre-eminent degree, an artist and a poet. Even though he searched into the problems of physics, of dialectics, of ethics, of natural theology, and clarified the vast world of metaphysics with the illumination of his brilliant intellect, Plato has yet remained the artist glorying in a vision of beauty, and a poet whose voice sings of that wondrous vision. This fact, that Plato is a poet as well as a philosopher, leads us to one of the most bewildering of Platonic paradoxes—the paradox of Plato, the poet, spurning almost every form of poetry from his Republic. In this paradox an eccentric phase of Plato's philosophy confronts us, the queer enigma of a poet-philosopher stigmatizing the very art by which he has adorned his own philisophic message to the world. How can this anomaly be explained? Within brief space we shall endeavor to give a solution of the paradox by probing into the very essence of Plato's philosophy—the theory of the Absolute Forms.

For Plato there existed a triple reality in the universe. 1.) The Absolute Forms. 2.) The Phenomena. 3.) The artistic Imitations of the phenomena. So supreme are his Absolute Forms that it is no exaggeration to say that with the Forms the entire system of Plato's philosophy stands or falls. It is not our purpose to disprove the validity of the Forms; we are employing them only as a means to explain Plato himself, to interpret and to solve the problem and the paradox of Plato's aesthetics. It is when Plato describes the Forms that he becomes the lyrical poet: "The vision of the Forms will cause to pale into insignificance all your gold and all your shining robes, and all the faces of your friends whose fairest aspect now so delights and astonishes you. But tell me what would happen if one of you had the good fortune of gazing upon essential Beauty, entire, pure and unalloyed, not diminished by the flesh and color of humanity and ever so much more of mortal trash?"[1] The Forms according to Plato are first in the order of reality and excellence. They alone have real existence and are the exemplars according to which all mundane materials are shaped. They impart existence and perfection to the phenomena, they are eternal and immutable and are accessible only by reason. The phenomena, however, have no reality, no existence of themselves except in so far as they receive it from the Forms. The third reality of Plato's philosophy is imitation, and, since imitation is so vitally important for the understanding of Plato's paradox, we must treat of it more in detail.

Imitation was according to Plato the very essence of art and it is significant that the terms "Fine Arts" were unknown to Plato; to him they were the "Imitative Arts." The necessity of imitation was also appreciated by Aristotle, who in his treatise on poetry traces the origin of poetry to man's natural tendency and delight in imitation. Plato viewed imitation in the light of his Absolute Forms and forced by the logic of his philosophy he had to consign imitation to the lowest possible degree of reality and existence. To Plato every artistic representation must be an imitation of a phenomena, i. e. of a visible and sensible object, and since these phenomena are themselves only imperfect reflections of the Absolute Forms Plato had to conclude that all mimetic art is twice removed from the truth and is only an imitation of an imitation. Thus the cause of Plato's disparaging estimate of art can be principally found in the theory of the Forms. Plato would have the artist interest himself not in the making of an image but in the reality itself which is nothing less than the Absolute Form. Poets and artists should cease from the pursuit of a phantom beauty, the meagre beauty which is dimly seen in beautiful phenomena—poets and artists should rather devote themselves "to that particular study which is concerned with the beautiful in itself".[2] This study is, of course, philosophy. In other words, Plato advises poets and artists to make the study of the Absolute Form of Beauty supreme and foremost. The true admirer of beauty, Plato claims, should realize that all beauty is one and the same, and the poet can only come to realize this by studying the Absolute Form of Beauty as it manifests itself in all its beautiful phenomena. The true lover of beauty must be able to rise from myriad manifestations of beauty to one general concept of beauty; he must be rational and love not merely beautiful forms and beautiful colors and beautiful sounds, but rather he should love and admire beauty in itself which, according to Plato, is nothing else but the Absolute Form of Beauty.

Plato, though he did not realize it, has so exalted the excellence and dignity of the Absolute Form that he has minimized and practically forgotten the universal element of beauty which is to be found in every worthwhile poem or painting. Plato believed that the poet working within his own limited range of experience sacrificed that tre-

[1] *Symposium*, 211-B.

[2] *Symposium*, 211-C.

mendous knowledge of beauty which philosophy could impart to him. What Plato failed to realize was that the artist does not depict the object merely as an object, he rather beholds in it a magnificent revelation of the Absolute Form. The poet does not rivet his gaze on one particular aspect of beauty; he breaks into the sensuous envelope which encloses the phenomenal beauty and reveals the Absolute Form shining through the veils of sense.

Thus does Shelley describe the poet's work:

> He will watch from dawn to gloom
> The lake-reflected sun illume
> The yellow bees in the ivy bloom,
> Nor heed nor see, what things they are;
> But from these create he can
> Forms more real than living man,
> Nurslings of immortality.

At times poets grasp the universal more readily and more comprehensively than philosophers, and far from being engrossed in particulars Shakespeare says:

> Lovers and madmen have such seething brains,
> Such shaping fantasies that apprehend
> More than cool reason ever comprehends.
> The lunatic, the lover and the poet
> Are of imagination all compact;
> One sees more devils than vast hell can hold
> That is the madman; the lover all as frantic
> Sees Helen's beauty in a brow of Egypt;
> The poet's eye in a fine frenzy rolling
> Doth glance from heaven to earth, from earth to heaven
> And, as imagination bodies forth
> The forms of things unknown, the poet's pen
> Turns them to shapes and gives to airy nothing
> A local habitation and a name.

We have the full doctrine of Plato on artistic appreciation in the tenth book of the Republic. There he writes: "The imitator, then, is a long way off from the truth and he is able to imitate all things because he only partly touches them and that part which he touches is only an image. Thus, for example, a painter will depict a shoe-maker, a carpenter, or any other artificer, even though he is entirely ignorant of their arts; and if he happens to be a clever artist he will be able to deceive children and simple people because they will readily believe that they are really looking at a real shoe-maker, a real carpenter." This theory of mimetic art proposed by Plato is all the more puzzling because it contains a partial truth, namely, "for they will readily believe that they are looking at a real carpenter." Because poets and painters thus deceive children and simple people Plato rejects them and accuses them of telling lies *(pseudesthai)*. Art for Plato, then, was sheer and barren imitation; it was not a creative act which elicited special creative faculties in the soul of the artist. Thus a photograph would be the highest art and the most perfect type of art, because it would be the most accurate imitation of its object. Vigorously and courageously did Plato, the poet-philosopher argue that if artistic representation differs from the nature which it represents only in degree and completeness of its existence, then it differs only for the worse and is a purposeless reproduction of what was already in the world.

From what we have said it may be safely concluded that idealization was not recognized by Plato to be an integral and all pervading element in the world of art. Plato would have denied that the artist seeks to give to the Absolute Forms more complete expression than they had in the realm of particular phenomena, that the artist endeavors to shed more light on this ideal Form which is only half revealed in this world of reality. Plato was wrong, therefore, and unjust to the artist when he accused him of "deceiving children and simple people." The artist represents the ideal shoe-maker, a work of art which is not a mere surface resemblance. The painter's picture is a manifestation of a higher truth than the reality, the expression of an ideal which through the medium of art becomes more apparent than it was in the actual world. Shelley interpreted this idealization when he wrote, "Poetry lifts the veil from the hidden beauty of the world; it turns to loveliness everything it touches; it exalts the beauty of that which is beautiful and adds beauty to that which is most deformed."

Even though Plato's theory of the Absolute Forms has shed some light on this most enigmatical of Platonic paradoxes, yet it does not entirely elucidate nor solve the problem. The one true solution is embedded in Plato himself. Plato possessed depth and vastness of knowledge, he had art; for once the poet and philosopher lived in one soul. Such a mixture of philosophy and poetry, of science and of art, necessarily spells confusion and biased opinions. Aristotle, who had not a spark of artistic genius in him, whose writings are the most severe of scientific treatises, has rendered more justice than Plato to poetry. The reasons for Aristotle's lucidity of meaning and his impartial rendition of justice may be ascribed to the fact that Aristotle was not an artist. This enabled him to recognize art and philosophy as separate spheres. Plato, however, being both philosopher and poet, could not keep the realms of art and of philosophy distinct; yet never before, we may safely believe, had philosophy decked itself in so brilliant a garb, and surely never since has there existed that rare combination of poet and philosopher in one man.

TWO SCHOOLS OF BECOMING

Continued from page 49

whose deity is "a variable quality" or the "nisus toward a higher birth."[12]

When such a system of paradox and verbal quibbling can win a position of prestige, we may be sure that common sense is being forsaken for the craze of originality. Yet even to the title of originality, Bergson and his school of Becoming seem to have little claim.

[12] Vol. 11, p. 348.

WHY VITALISM

Continued from page 52

with the astronomical theories of his day. His ignorance of the laws of gravitation led him to assign a kind of divinity to each of the planets, to guide it in its destined way. At that time, of course, the earth was the center of the universe, and the other celestial bodies constituted merely a kind of pageant for the entertainment of men on earth.

It no doubt does happen that such a philosophy reacts upon the scientist, who is apt to consider that the limit of human knowledge has already been reached, and dampens his ardor for the pursuit of more complete knowledge. Still, it seems to me that the onus of the blame rests with science. True philosophy can readily afford, yea needs the aid of an enlightened science in its quest of the "whole reality"; held at the mercy of a myopic and hence incomplete and untrue scientific system, its own progress will be retarded in proportion.

The rôle of science is to determine the constant relations of antecedent and consequent, of cause and effect; in other words, to determine the laws to which natural phenomena are subject. The explanation of the *nature* of these phenomena, passing as it does outside the range of experimentation, belongs by right to philosophy and to philosophy alone. "If the scientific theory is explanatory," writes Professor Pieron of the University of Paris, "this is but an accessory factor; it cannot be the *purpose* of science. . . . A theory which aims solely at explanation takes on a subjective character that is no longer scientific, but pertains to metaphysics."[2]

[2] "Scientia," by H. Pieron, *Le Conflict Scientifique entre Mecanisme et Vitalisme*, Vol. 31, p. 117, 1922.

Further on, the same author concludes: "After all, scientifically speaking, it is not at all necessary to be a vitalist or mechanicist, or to adopt a philosophical system capable of satisfying one's own subjective curiosity, which in the interest of research is better left unsatisfied. As an incentive to research, however, such a conviction may be useful. . . . Mechanicism seems to be above all a factor of daring research, and Vitalism a factor of prudent control, or brake; I believe that without scorning the eventual utility of a control that will refute erroneous anticipations or restrain excessive audacity, the diffusion of mechanicism should be favored, in the interest of science."[3]

Were the question to be considered solely from the point of view of science, I should be inclined to agree with the writer. The methods and principles of strictly scientific mechanicism are quite legitimate and have more than proven their usefulness in all branches of natural science. Nevertheless, the ever-present temptation to introduce these methods and principles into philosophy and the serious evils attendant upon this confusion should, I think, lead one to attach a much greater importance to the factor of "prudent control," a factor whose need never made itself felt with such pressing force as at the present day, when false and one-sided views and blind prejudice are begin inculcated into the minds of the young and ignorant the world over through the press, the theatre, the radio, and alas, even from some would-be Christian pulpits, in the guise of "scientific fact"!

[3] Pieron, l. c., pp. 125, 126.

BOOK REVIEWS

PROCESS AND REALITY

By Alfred N. Whitehead

New York, Macmillan, 1929, $4.50

THE Author has set himself to write a new philosophy based on an interpretation of the Philosophy of Organism. As he declares in the preface: "the historical and critical study of the past two centuries has done its work and requires to be supplemented by a more sustained effort of constructive thought." This work deals with his view of Cosmology.

Unfortunately, however, one of the first difficulties met with by Professor Whitehead is the total inadequacy of language in dealing with metaphysics. "It is quite untrue that language does enunciate well defined propositions; language is thoroughly indeterminate." As a result he has adopted a terminology that frequently renders the meaning almost unintelligible. Such expressions as "a strain-locus bounded by two flat tri-dimensional surfaces", "the what is the how" and "non-living organisms", are, to say the least, displeasing in a work which makes any pretentions to exactitude. The reader is led to believe with the author that perhaps language is not an instrument for the expression of thought—at least language as used by Professor Whitehead.

The doctrine developed in *Process and Reality* may be thus summarized: "There is such a thing as a possible world—Plato's world of the possibles—which is realized into an actually existing world. This real world is made up of "Actual Occasions" (real entities) and Eternal Objects (in our terminology the universals). The "Actual Occasions" admit of change. Change is the only reality and is expressed mathematically as being equivalent to substitution. There is no unchanging subject. 'No thinker ever thinks twice.' All that lasts in the individual is the Historical Route, a pattern which begins and lasts through a series of events.

"All things have feeling" captions his Philosophy of Organism. "Every entity is what it is conscious of and is characterized by its feelings. These feelings, reaching out into the world adopt or reject — an activity known as objectivation. The adopted or appropriated objects become parts of the entity." An entity is, then, a society of other entities. If so, then man is a living society, and the atom is made up of an inorganic society; the electron, the smallest constituent of matter known to science, must itself be a society, because it "has tendencies and reaches out toward other entities.

Cognition is defined as the human intellect trying to harmonize and justify its feelings and emotions on some theory. Religion, too, is only feeling, and as such it does not consider so much the objective truth of a proposition as the feeling engendered. The propositions of religion are but a lure for feeling.

Due to a peculiar diction it is difficult to arrive at a clear cut idea of Professor Whitehead's concept of God. For him God is a Process, that is, a Reality. There are in God two natures: the Primordial—this seems suspiciously like the Platonic Universal—and the Consequent "which evolves in its relationship to the evolving world without derogation to the eternal completion of its primordial conceptual nature." Does this mean God as working in what we call creation? Elsewhere he speaks of God as "remorselessly working."

A monist evidently, yet he straddles the monistic position by a touch of dualism: everything is "bi-polar"; God seeking multiplicity and the world seeking unity is made the background of his metaphysics.

The final results of reading his work would be first to disgust the student of philosophy because of obscurity of meaning and expression; in addition it should give rise to a tendency toward intellectual scepticism; it changes and degrades the idea of God to a mere process of nature. Nothing is true but change; all religion is but feeling; there is no real freedom, only a certain spontaneity of feeling. All stable principles of morality are destroyed. H. E. G.

THE PHILOSOPHY OF ART

By C. J. Ducasse

New York, Dial, 1929, $3.50

WHAT with the booming, buzzing confusion that marks the current situation in aesthetics, any new book on the philosophy of art described by the blurb writer on a bright yellow wrapper as "individualistic," is likely to get off to a bad start with the bored reviewer. The present volume, however, by Mr. Ducasse of Brown University, quickly overcomes this initial handicap. It does not contribute to the confusion, one finds. Instead it clarifies the situation admirably, and will, if widely read (which is doubtful) do much towards bringing muddled critics back to sanity in artistic matters.

With crystal clarity and courageous logic the author has succeeded in stating and espousing the very theory that lies at the root of the modern tangle in aesthetics. He has been at such pains to make its tenets obvious, and has displayed such bravery in carrying these principles to their logical conclusion, that the theory stands forth fully revealed (for perhaps the first time in history) in all its naivete, its absurdities, its burlesque on intelligence.

Heretofore the chief defense of those who held the theory of the complete autonomy of art (for this is the theory) has been a certain charming vagueness. In this form, and especially as it was represented by the Victorians, it has captivated the minds of many who ought to have known better. Its central doctrine is that art is the mere expression of oneself without any reference to the type or quality (especially moral) of the self expressed. "It may be the noble mind of a Walter Scott or the unclean mind of, let us say, a George Moore, the regal sanity of a mind like Dante's or the nervous and rebellious mind of a Shelley; if it has been laid bare to us in terms so vivid that the experience of the writer is born again in us, we have good writing, good literature," as a recent writer has put it.

Mr. Ducasse's book is invaluable to anyone who might still hold to this theory in its timid Victorian form, unaware of its explosive connotations. He makes these connotations clear. For if there is no necessary connection between art and morals, it follows that there is no necessary connection between art and beauty, because the good is a constitutive element in the beautiful. Mr. Ducasse takes this step unflinchingly and like a true logician. He says: "Art is not an activity aiming at the creation of beauty." (p. 15) For many works of art, especially nowadays, are ugly. "Ugly art exists in vast quantities, ugly designs, ugly paintings, ugly architecture, ugly music, ugly dances, and so on." (p. 17) Some people, he remarks, refuse to call these ugly productions works of art, giving as their reason the fact that they are not beautiful. But this is based on a mistaken notion that there is an essential connection between art and beauty. That these ugly productions are works of art is clear from the definition that art is the expression or "objectification" of an inner state; and these works undoubtedly express an inner state of the artist, an ugly state it is true, an unpleasant state, but still a state. "This ugly picture" he quotes the artist as saying, "to which you refuse the name of work of art was born in exactly the same way as that other work of mine which is beautiful, and to which you grant the name."

Having rid art of any connection with the good and the beautiful the next logical step is to proclaim its divorce from truth. It is in making this last leap that Mr. Ducasse shows real heroism and logical consistency worthy of a more sympathetic age than our own. He explains what he means by the process of objectifying the artist's feeling which he has called the essence of art. "In objective expression the feeling, meaning, or volition which is expressed is not necessarily expressed in perceptual stuff i. e. in material rendering observation by *others than the artist* possible (italics ours)." (p. 112) It has two qualities: "The art of expression is creative of something (1) capable of being contemplated by the artist at least, and (2) such that in contemplation that thing yields back to him (the artist) the feeling, meaning or volition of which it was the attempted expression." (p. 113)

By way of quieting the surprise of those who up to this had been under the impression that art was meant to be understood by others, Mr. Ducasse adds that the artist in thus "registering" himself objectively "may and usually does reveal himself not only to himself but to others." But such revelation is not essential to art, he leaves us to understand.

This, one suspects, is the ultimate point to which this delightful sorites can be carried. If it can be pushed back any further Mr. Ducasse would have done it. We have this much confidence in his dialectical ability.

In writing a book on aesthetics one of three possible ways may be followed. First, the inductive method, in which existing works of art are examined and analyzed so as to yield up the principles upon which the great works of art have been constructed. Secondly, the inductive-destructive method, which consists in the inductive method, by which it is determined what art *has been*, plus philosophical principles showing what art *ought to be*. And, thirdly, the pure deductive method which involves the total neglect of what art has been and the formulation *in vacuo* of a theory of what art *ought to be*. Mr. Ducasse uses the last method. He purposely avoids all reference to specific works of art in literature, painting, music, etc. He remarks in one place, "I shall mention no instances for they would represent only my own aesthetic evaluations, which are no more binding upon others than upon me." (p. 16) He adheres to this policy throughtout the book, and to good effect. The concrete somehow has a way of contradicting the abstract. And the author above all wants his logic to stand out clearly. Which it does, and this is the chief merit of the work and its claim to recognition as a distinct contribution to aesthetics. Admit his premise, his definition that art is the expression or "objectifying" of an inner state of the artist without reference to the quality of that state, and everything else follows in strict logical sequence.

This reviewer unhesitatingly recommends *The Philosophy of Art* to perusal of all. It can do no harm to the most innocent of

Financing Churches and Institutions

For more than a quarter of a century the personnel of the Real Estate Loan Department of this Company has been an important factor in financing the erection of Churches, Schools, Hospitals, Convents, and buildings of a similar type throughout the United States. This long background of service and the many millions of dollars loaned have given us a broad experience and a deep insight into the financial problems of Churches and Institutions and enable us to make loans very economically and to the best advantage of the borrower.

These loans are spread over a term of years, the present and future generations sharing the benefits and responsibilities of the new building projects, while the burdens are not found irksome by either.

The pleasant relationships formed between our officers and the superiors of institutions who have availed themselves of our service are a source of pride and satisfaction to us. By fair dealings, personal contact and helpful suggestions, this relationship has not only continued through the years, but in many instances has resulted in an expansion of patronage as the needs of the institutions grew.

In emphasizing this service we invite the superiors of other institutions who are not familiar with our plan of financing to write to us, and our officers will be glad to explain our methods and render every assistance in connection with building plans.

MERCANTILE-COMMERCE COMPANY

Locust - Eighth - St. Charles
St. Louis

minds and cannot but effect a conversion in many less innocent ones who hold Mr. Ducasse's definition of art but have not his dialectical acuteness to see where it must inevitably lead.

CALVERT ALEXANDER.

THE HISTORY OF PHILOSOPHY.
A Textbook for Undergraduates.
By Paul J. Glenn, Ph. D., S. T. D.,
Professor of Philosophy and the History of Philosophy in the College of St. Charles Borromeo, xiii/383.
Herder, 1929, $3.00.

IN presenting this volume to the scholastic world the author has set himself neither to startle nor amuse, but to serve the student and teacher. The book "is meant to be insistently clear, and, therefore, it employs such pedagogical aids as strict division and correlation of parts and an emphatically plain method of development." The author has written his own best encomium, for in the main these aims have been accomplished and, though the literateur may frown at the sometimes stark effect produced by a plan which is intended to be "obvious" and primarily "logical," the harassed undergraduate and his equally harrassed professor will judge mildly of such deficiencies in a textbook. The organic unity of philosophical development is maintained in the face of precise division into "books" for the greater epochs, by a preliminary survey preceding each little treatise and by a synoptic view at the beginning of many chapters. These summaries prevent the story of philosophy from developing into mere catalogue of names and some of the little outlines, notably those preceding the rise and the decline of Scholasticism are very neat pieces of synthesis.

One does meet, however, typographical peculiarities which do not seem to serve the purposes of clarity. Is the saving of time gained by referring to a century, as the "17 century" or the "20 century," worth the momentary jar which the reader gets while he seeks the familiar "th"? To head a list of great Scholastics with William of Auvergne all in capitals, while Thomas of Aquin follows meekly in lower case, might recommend itself to the humility of the Angelicus, but scarcely to the sense of proportion of his disciples.

The Right Reverend James J. Hartley, Bishop of Columbus, in his preface notes with regret the very real tendency of modern man to "accept the word of Professor Jones" and goes on to note the large part played by publicity in gaining acceptance for current philosophizings. If the philosophic neophyte in our scholastic institutions knows little of the achievements of the Scholastics since Aquinas, while he has at least some small acquaintance with Russell or Einstein or the quasi-philosophical journalism of the facile Mr. Durant, is it not partially at least our own fault in that we do not properly estimate and advertise (pardon the word) our own great men of modern times. The reader of the volume in hand, though he will find several paragraphs on Machiavelli and de Groot must be satisfied with the mere name of Vittoria and the treatment of Suarez' work is innocent of mention of the great "De Legibus." The political writings of Hobbes and Locke come in for extended discussion, but the student would never know that Mariana, Vittoria, Suarez and Bellarmine had sufficient effect upon these thinkers and these times, that Cromwell himself is reputed to have quoted to the Presbyterians the doctrines of these men along with those of George Buchanan, alumnus of Coimbra and tutor of James I.

Likewise one questions the justice of according over three pages to Traditionalism and Ontologism, while Neo-scholasticism merits a scant page. Most of the great early neo-scholastics are but catalogued, yet surely if the false doctrines deserve so extended discussion, Tongiorgi's "masterly" presentation of the classic refutation of scepticism and his reaffirmation of the three fundamental truths should not be overlooked. If

it is worthy of mention that Benedict Feijoo thought that brutes could reason, the Scholastic side of the scientific movement as personified in Kircher, Boscovich and Secchi, ought to be accorded at least a momentary bow. If the hardihood of Hume in facing the conclusions flowing from his premises be meritorious, should Neo-scholastic pioneers like Taparelli and Dmowski receive only oblivion for their boldness? If we are to record in detail Bacon's rejection of deduction, shall we leave the beginner in Scholasticism in ignorance that the genius of de Lugo attained by deductive means truths which the experimental psychologist regards as strictly his own by right of discovery? Yet many of the scholastic thinkers here noted are not so much as mentioned in the volume under review. We can scarcely expect our students to respect the great scholastic thinkers when their textbooks show them, not as constructive leaders, but as eternal apologists of a "creed outworn."

BERNARD W. DEMPSEY.

BACKGROUNDS OF BIOLOGY

By John Giesen, Sc. D., and Thomas L. Malumphy, A. B.

Milwaukee, Bruce, 1929, $2.50

"BACKGROUNDS OF BIOLOGY" is the result in printed form of a lecture course of one hour a week in biology at Holy Cross College. This was intended to give a fundamental knowledge of the subject to students who found it impossible to take a standard laboratory course. The first twelve chapters are the work of Mr. Giesen, the senior author. Mr. Malumphy, his assistant, has written Chapters XII to XVI. The concluding pages have been taken *in toto* from Professor Edward J. Menge's *General and Professional Biology*.

This book, coming at a time when the field is overcrowded with text and reference books, would at first sight seem somewhat unnecessary. The most cursory reading of the preface, however, will convince one that it sets itself a goal that few have attained. Not that there is lacking men of talent, but few have endeavored to supply the need. In the words of the authors, ". . . . there is still a widespread ignorance of the most fundamental conceptions of this science among students and educated people in general. To give students and readers who are unfamiliar with biology a background for a proper approach to such problems, is the chief object of this work."

To say that the authors attained their object would be high encomium. But they have attained it, indeed marvelously well. It is no slight task to present clearly and interestingly such subjects as the cell theory, the structural and functional aspects of the cell, reproduction, heredity, Mendelian laws, eugenics, and organic evolution. For the average student to appreciate these vexed problems, diligent and patient study is required. It is to the credit of the authors that by their clearness they have lightened that task; by their pleasing style they have made it, not a painstaking examination of figures and statistics, but pleasant reading.

In this very fact lies the chief worth of the little volume. Intended only as introduction to the science, it does not profess to supply the needs for a course in general biology. As a reference book, especially for the work done in the first two months of the usual pre-medic course, it will be found most helpful. It does not overwhelm the mind with a mountain of data; the less trained and unenthusiastic student will not have to piece together a few intelligible strands of thought while his mind is saturated with half-digested facts. Whereas the student entering upon a course in rational psychology will find the mechanistic and vitalistic concepts of life made forcefully clear, and the problems involved in each summarily outlined. Benefiting by the authors' duality of purpose the beginner in biology or psychology will be orientated in the backgrounds of both.

RAYMOND H. REIS.

To the Student Finishing a Catholic College

SAINT LOUIS UNIVERSITY

1818--1930

offers, in its graduate and professional departments, superior facilities for advanced work in a Catholic atmosphere which is the result of a century of cultural development.

Professional training offered in Divinity, Medicine, Law, Dentistry, Commerce and Finance, Education, and Nursing.

Advanced instruction and graduate degrees given in thirty departments.

Highest academic standing in all departments.

A limited number of teaching fellowships, graduate assistantships, and service scholarships are available to graduates of Catholic colleges.

Address:

THE REGISTRAR

221 North Grand Boulevard

Saint Louis, Missouri

The Political Economy of Juan de Mariana

JOHN LAURES, S. J., PH. D.
Professor Designate of Political Economy
Jicho University, Tokio

WITH A FOREWORD BY

EDWIN R. A. SELIGMAN, PH. D., LL.D.
McVickar Professor of Political Economy
Columbia University

"Father Laures . . . has in my opinion given us a distinct contribution and has enriched the history of economic doctrines with a noteworthy study."
—DR. SELIGMAN.

$3.00 *net*

FORDHAM UNIVERSITY PRESS WOOLWORTH BLDG. NEW YORK

THE MODERN SCHOOLMAN

This quarterly journal presents studies on the principles and history of philosophy, reviews of recent philosophical literature and news and activities of the philosophical world. Jesuits teachers of philosophy and students in the Jesuit houses of study are the contributors.

For the undergraduate, the SCHOOLMAN renders philosophy living and intelligible; for the alumnus, it is a simple means of retaining his knowledge of the subject; for the teacher, it is a valuable aid to interest and discussion in the classroom; for the library it is a source of current philosophical information.

Published at St. Louis

November, January, March and May

One Dollar Per Year

THE MODERN SCHOOLMAN—
ST. LOUIS UNIVERSITY, ST. LOUIS, MO.

Gentlemen: Enclosed find $..... for my subscription to THE MODERN SCHOOLMAN

from..... to.....

Signed.....

Address.....

.....